NOTE XX.

ON FIVE NEW SPECIES OF THE GENUS ICHTHYURUS, WESTW.

BY

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Of the above mentioned genus of Malacoderm Coleoptera, founded in 1848 by Westwood in his *Cabinet of Oriental Entomology*, twelve species have hitherto been described, all natives of the Old World and distributed as follow: Sierra Leone (West Africa): one [1]); Moulmein (East-Indies): two [2]); Ceylon: two [3]); Pulo Penang: one [4]); Java: one [5]); Borneo: one [6]); Luzon (Philippines): three [7]) and Gayndah (Australia): one [8]). Of the species described in this note two are collected at Java, two at Sumatra and one in Abyssinia.

1) *I. discoidalis*, Westw. (*Cab. of Orient. Entom.* p. 84 note, and *Thes. Entom. Oxon.* p. 102, pl. II, fig. 2).

2) *I. costalis*, Westw. and *I. basalis*, Westw. (*Cab. of Orient. Entom.* p. 83, pl. 41, fig. 3 and p. 84 note).

3) *I. bicaudatus*, Fairm. and *I. inermis*, Fairm. (*Stettin. Entom. Zeitung.* Jahrg. XXVIII, S. 116).

4) *I. Doriae*, Gestro (*Annali del Mus. Civ. di Storia Nat. di Genova.* vol. IV, p. 359).

5) *I. lateralis*, Westw. (*Cab. of Orient. Entom.* p. 83, pl. 41, fig. 2).

6) *I. forficuloides*, Fairm. (*Stettin. Entom. Zeitung.* Jahrg. XXVIII, S. 114).

7) *I. Semperi*, Fairm., *I. Dohrnii*, Fairm. and *I. scripticollis*, Fairm. (*Stettin. Entom. Zeitung.* Jahrg. XXVIII, S. 113—115).

8) *I. depressicollis*, W. Macleay (*Transact. of the Entom. Soc. of New South Wales.* vol. II, prt. IV (1872) p. 264).

1. *Ichthyurus octopunctatus* (v. Voll. in Mus. Lugd. Bat.), sp. n.

Length about 8 mm. — The head, the parts of the mouth and the antennae black, except the face as far as the vertex, the mandibles and the two basal joints of the antennae, all of which are golden yellow. The prothorax golden yellow, the disc with a large transverse black spot joining the lateral margins near the anterior angles and narrowed behind; the mesothorax, the scutellum and the metanotum golden yellow, the former with a fuscous spot on each side above the intermediate coxae, the latter with two lateral ovate black points, and, behind its posterior margin, with a triangular black spot. The elytra golden yellow, the outer margin from a little behind the base to the end black, the black margin very broad at its base and pointed inwardly, then narrowed; its inner margin undulated; the wings iridescent, with a somewhat milky tinge, brownish along the costal nervure. The anterior legs golden yellow, with the tibiae and tarsi black, (*the intermediate pair wanting*), the posterior legs golden yellow, with the apex of the tibiae and the tarsi brown. Abdomen golden yellow, with two lateral ovate points on each of the four basal segments, these points placed in longitudinal impressions; the apical segment black, with a brownish stain at the middle of its base. Beneath: the apical segment of the abdomen brown at its base, the three basal segments black, with the posterior and lateral margins yellow; the metasternum black, with a large yellow spot on each side.

The head and pronotum shining, delicately punctured, the latter somewhat flattened before the middle of the hind margin, and with a slightly raised, finely grooved, polished, longitudinal carina in the middle; a row of deep punctures near the anterior and posterior margin. The elytra opaque, very closely covered with irregular punctures; a fine im-

pressed line runs from the outer margin behind the shoulders to the yellow portion at about two thirds of the length of the elytra; the elytra are narrowed towards the apex which is rounded; the outer margin concave behind the shoulders, the inner margin waved; the shoulders prominent. The abdomen long and slender, its sides parallel; the apical segment longer than broad, the upper surface plane, the sides straight and parallel, the incision angular, not quite as deep as half the length of the segment, its sides straight.

A single specimen brought home from Java by the late Prof. Blume.

2. *Ichthyurus bifasciatus*, sp. n. ♂.

Length about 8 mm. — The head, the parts of the mouth, and the antennae black; the mandibles brown; the face between the base of the antennae and the mouth, a line at the inner orbit of the eyes above the base of the antennae, and the three basal joints of the antennae pale yellow, the last stained with fuscous posteriorly. The prothorax black, its posterior and lateral margins narrowly pale yellow; the scutellum pale yellow; the elytra pitchy, with a narrow pale yellow fascia across the base and a broader one before the apex; the basal fascia continued a little along the outer margin, the apical one slightly curved; the wings splendidly iridescent, with a somewhat milky tinge, brownish along the costal nervure. The legs pitchy, with the apex of the coxae, the trochanters, the base of the femorae and the knees pale yellow, the latter more or less indistinct; at the first and second pair the entire underside of the femorae pale yellow. The abdomen pitchy, the apical margin and edges of the segments pale yellow, less distinct towards the apex, especially beneath. Beneath: the thorax pitchy, with two pale yellow spots on each side, one above the intermediate, the other above and before the posterior coxae.

The head sub-opaque, with a large but indistinct heart-shaped impression on the face above the antennae. The pronotum very smooth and shining, covered with subtile punctures, and with a row of deep punctures near the anterior and posterior margin; a somewhat quadrangular impression before the middle of the hind margin, the impression with a slightly raised and posteriorly grooved carina in front. The elytra sub-opaque, closely covered with large punctures as far as the front margin of the pale yellow apical fascia, then without distinct punctures; a slightly raised longitudinal line runs, not quite in the middle, nearly parallel with the outer margin, and also an oblique impression from the outer margin behind the shoulder towards the inner margin a little before the apex without however reaching it. The elytra very little narrowed towards the apex which is broadly rounded, the sides nearly parallel, the shoulders prominent. At the intermediate legs the trochanters are sharply pointed at the apex within, the femorae incrassated, slightly curved and armed beneath with an acute tooth a little before the base, the tibiae longer than the tarsi, nearly straight, the under surface flattened, its margins irregularly serrated. The abdomen slender, much narrowed towards the apex, each segment, except the apical one, being narrower than the preceding one; the apical segment roof-shaped, about twice as long as broad at its base, its sides straight, very little divergent; the incision angular, almost reaching the centre of the segment, its sides straight.

Two males from Mount Ardjoeno, East Java (W. E. J. Hekmeyer).

3. *Ichthyurus suturalis*, sp. n. ♂ and ♀.

Length about 11 mm. — *Male.* The head, the parts of the mouth and the antennae black; the labrum and mandibles brown; a tricuspidated spot on the face beneath the antennae and the two basal joints of the antennae

golden yellow, the latter stained with fuscous posteriorly. The prothorax black, with the lateral margins broadly, the posterior narrowly margined with golden yellow; the scutellum and two small triangular spots on the middle of the metanotum immediately before each other golden yellow. The elytra black, with the shoulders narrowly and the suture broadly golden yellow; the wings iridescent, hyaline, with the costal portion brown. The legs black; at the anterior pair the apex of the coxae, the trochanters and about the basal half of the femorae, at the intermediate pair the apex of the coxae and the trochanters and at the posterior pair the coxae and the base of the trochanters and femorae pale yellow. The abdomen black, the lateral margins of the segments yellow, broader at the posterior edges, but less distinct towards the apex; the posterior margin of the segments most narrowly margined with yellow, that of the two penultimate segments broader. At the under surface: the posterior margin of the abdominal segments black, the thorax black, with three yellow spots on each side, placed above the coxae.

The head opaque, closely covered with very fine punctures; a large impression at the vertex; the scape of the antennae outwardly with a small tubercle at the middle. The prothorax opaque, closely covered with small punctures, and with a row of confluent punctures near the front and hind margin; the hind margin sinuated near the posterior angles; a somewhat heart-shaped impression before the middle of the hind margin and a longitudinal slightly raised line across the middle of the disc. The elytra narrowed behind the middle; the apex rounded; the outer margin concave behind the prominent shoulders, the inner margin concave behind the short suture; opaque, the basal portion covered with large punctures; an oblique impression runs from the outer margin behind the shoulders as far as the middle of the base of the attenuated portion, and then runs upwards to the inner margin as far as the apex of the yellow sutural spot. The anterior tibiae slightly

curved and as well as the apical half of the femorae covered beneath with long black hairs. The intermediate trochanters bifid, the inner tooth sharply pointed, the outer and longer one compressed and obliquely emarginated at the apex; the intermediate femorae incrassate, slightly excavated within and strongly compressed beneath; the under margin angular, the basal portion concave, then very minutely serrated and inwardly with a row of short ribs; the intermediate tibiae about as long as the intermediate tarsi, compressed, turned at the apex. The abdomen somewhat narrowed towards the apex; the apical segment at its base narrower than the penultimate, about twice as long as broad at the base; its sides divergent, very slightly waved; the incision angular, reaching the centre of the segment, its sides curved outwardly; the under surface of the apical segment divided by a longitudinal deep gutter; on each side of the gutter a flattened portion which is striated longitudinally and limited laterally by a raised straight line; the inner margin of the flattened portions terminating in a very compressed acute edge, obliquely directed inwards; the space between these edges and the tail-tips sinuated.

Female. Differing from the male in having the middle of the posterior margin of the prothorax and the shoulders black. The legs are black, with the apex of the posterior coxae yellow, and the anterior and posterior trochanters as well as the extreme base of the posterior tibiae brown.

The vertex of the head more slightly impressed and with a fine longitudinal line across the middle; the scape of the antennae without the small tubercle. The narrowed portion of the elytra broader. The legs simple. The apical segment of the abdomen not quite twice as long as broad at its base, its sides parallel, slightly convex before the middle; the incision semi-oval, not angular, reaching the centre of the segment; the disc with a broad, arched impression before the incision; the under surface simple; the under margin of the anus slightly tri-emarginate, the inner emargination with two lateral acute teeth.

Hab. Sumatra. — The male specimen of this species allied to the Javanese *I. lateralis* Westw., was captured between 17 May and 14 June of last year in the Highlands of Palembang by Mr. A. L. van Hasselt, chief of the Scientific Expedition to Central Sumatra, equipped by the Geographical Society of the Netherlands; the female specimen in October 1877 at Alahan pandjang by Mr. Joh. F. Snelleman, Naturalist to the above mentioned expedition.

4. *Ichthyurus planifrons*, sp. n. ♀.

Length about 12 mm. — The head, the parts of the mouth and the antennae black; the mandibles dirty yellow, with the apex chestnut-brown; the face along the inner orbit of the eyes dirty yellow, embracing an oval black spot a little above the base of the antennae; the scape of the antennae with two lateral dirty yellow stripes. The prothorax black, with a transverse spot a little within the front margin and reaching the sides, and three oval spots touching the hindmargin dirty yellow. The scutellum pale yellow with a longitudinal black stripe across the middle. The elytra pitchy, with a mouse-grey tinge, blackish along the outer margin and at the tip; the wings hyaline, the costal portion brown. The legs black, with the tip of the coxae and the extreme base of the femorae pale yellow, the trochanters brown. The abdomen above as well as beneath dirty yellow, becoming fuscous towards the apex, especially beneath; the apical segment black, brown at its base. The thorax beneath black, dirty yellow along the upper margin on each side.

Of a more robust form than the foregoing species. The head shining, covered with very fine punctures, the vertex broad and flattened; the antennae thicker than in the foregoing species. The prothorax shining, covered with almost imperceptible punctures; its margins greatly raised; the lateral margins sinuated near the anterior, the hind

margin near the posterior angles; the disc with five impressions: one at each of the four angles, the fifth before the middle of the hind margin and with a slightly raised longitudinal line at its bottom. The elytra narrowed beyond the middle, the tip rounded, subopaque, the broad portion closely covered with distinct punctures; a slightly raised longitudinal line runs, not quite in the middle, nearly parallel with the outer margin, joining the inner margin at two thirds of its length; an impression along the outer margin from the prominent shoulder as far as the narrowed portion of the elytra; the narrowed portion itself slightly impressed, its margins, especially the apical one, raised. The anterior tibiae slightly compressed, somewhat enlarged. The sides of the abdomen nearly parallel; the apical segment at its base as broad as the hind margin of the penultimate segment, not quite as long as broad at its base, its sides somewhat convergent, at the basal half slightly convex; the disc impressed in front of the incision; the incision angular, not reaching the centre of the segment, its sides slightly curved outwardly.

Hab. Sumatra. — The described specimen belongs to the collections sent home by the Sumatra-Expedition, and is captured in April 1877 at Soepajang by Mr. Joh. F. Snelleman.

5. *Ichthyurus Gestroi*, sp. n. ♂ and ♀.

Of this species, captured in 1870 by Dr. O. Beccari at Keren (district Bogos, North Abyssinia) on the flowers of *Cissus quadrangularis* Schimp. [1]), I received both sexes through the kindness of Dr. R. Gestro of Genoa, under the name of *Ichthyurus discoidalis* Westw. However the received male specimen shows some such striking particularities of which no mention is made in the description of

1) *Annali del Museo Civico di Storia Naturale di Genova*, vol. IV, p. 359.

the male *I. discoidalis* [1]), that I cannot consider Dr. Gestro's species as identical with Prof. Westwood's. I have dedicated the new species to Marquis Doria's learned assistent.

Length about 8 mm. — *Male.* The head, the parts of the mouth and the antennae black; the face beneath and a short line along the inner orbit of the eyes above the antennae pale yellow; the base of the mandibles pale yellow, their tip chestnut-brown; the labrum tinged with brown; the three basal joints of the antennae pale yellow. The prothorax fuscous, its margins more or less brighter; the scutellum fuscous. The elytra yellow, paler towards the base; the wings almost hyaline, fuscous towards the costal nervure. The legs fuscous, with the tip of the coxae and the trochanters pale yellow; at the anterior pair the under surface of the femorae, at the intermediate pair the whole femorae except a large fuscous patch on the outer surface of the apical half, the under surface of the deformed portion of the tibiae and the apical not deformed portion of the tibiae, and at the posterior pair the base of the femorae pale yellow. Upper surface of the abdomen yellow, the four or five basal segments fuscous, margined with yellow; the apical segment fuscous. The under surface of the body fuscous; the segments of the abdomen margined with yellow, the apical segment with a yellowish stain at the base.

The head subopaque, the face shining, verry narrow between the middle of the eyes; the eyes surrounded by a slightly raised line; a longitudinal sharp carina on the cheeks, curved backwards at the top; a slightly raised longitudinal carina at the vertex. The prothorax shining; a row of confluent punctures near the front margin, the hind margin sinuated near the lateral angles; a curved impression before the middle of the hind margin. The

1) The female of this species seems to be unknown, at least undescribed.

elytra narrowed; the outer margin much curved inwards behind the prominent shoulders, the inner margin slightly so behind the suture; the apex rounded; a longitudinal slight impression at the middle of the broad portion, and another more distinct one at the tip. The elytra for about two thirds of their length covered with distinct punctures. The anterior tibiae compressed and sinuated. The intermediate trochanters very elongated, deeply grooved at the under surface, bifurcated at the tip, the inner tooth curved, compressed, slightly rounded at the apex; the outer tooth hyaline, elongated, compressed and enlarged at the apex; the intermediate femorae very much inflated, beneath excavated and the base armed with a compressed spine obliquely rounded at the apex; the intermediate tibiae transversely dilated at the basal half; the dilated portion deeply excavated beneath, its sides concave, its posterior angles, especially the inner one, elongated and curved inwardly; the apical half of the tibiae partly covered by the dilated portion; the first joint of the intermediate tarsi elongated, longer than the tibia; the posterior trochanters truncated at the tip. The abdomen slender, narrowed towards the apex; the apical segment at its base as broad as the hind margin of the penultimate segment, not quite twice as long as broad at its base, its sides convex; the incision angular, almost reaching the centre of the segment, its sides nearly straight; beneath: the under margin of the anus prominent, longitudinally grooved, incised at the tip.

Female. Differing from the male in having the face above the antennae totally black, the basal half of the elytra fuscous, slightly passing into bright yellow towards the tip; the legs totally fuscous; the upper surface of the abdomen bright yellow, the basal segments more or less stained with fuscous; the apical segment totally dark fuscous.

Less slender than the male. The face between the middle of the eyes broader; the longitudinal carina on the cheeks

more prominent; the vertex with four deep impressions: two rounded at the middle, and two lateral ones very elongated and slightly curved outwardly; moreover a very small but distinct impression immediately beyond the top of the eyes. The elytra less narrowed, the inner margins very divergent, without distinct suture. The legs simple, the basal joint of the intermediate tarsi shorter than the four apical joints together, the posterior trochanters rounded at the tip. The abdomen not narrowed towards the apex; the apical segment less slender and its incision less deep than in the male sex, its sides convex; the upper surface with a longitudinal impression on the tail tips, confluent in front of the incision, the under surface almost circular.

Leyden Museum, February 1879.